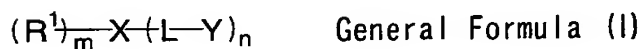


What is claimed is:

1. An ink jet recording medium comprising a support and an ink receiving layer disposed on the support, wherein the ink receiving layer comprises a complex formed from a metal with a valence of two or more and an acidic group-containing compound having a substituent group containing a nitrogen atom, an oxygen atom or a sulfur atom.

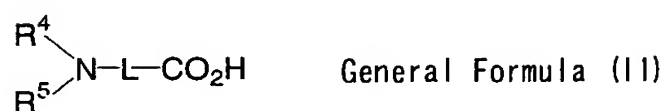
2. The ink jet recording medium of claim 1, wherein the acidic group-containing compound is represented by the following general formula (I):



wherein  $R^1$  represents one selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group,  $-COR^2$  and  $-SO_2R^3$  wherein  $R^2$  and  $R^3$  each independently represent an aliphatic group, an aromatic group or a heterocyclic group; X represents one selected from the group consisting of  $-N<$ ,  $-O-$ ,  $-S-$ ,  $-SO-$  and  $-SO_2-$ ; Y represents an acidic group; L represents a divalent linking group; m and n each independently denote an integer; and when X is one selected from the group consisting of  $-O-$ ,  $-S-$ ,  $-SO-$  and  $-SO_2-$ , (m + n) is 2, and when X is  $-N<$ , (m + n) is 3 or 4 provided that when (m + n) is 4, the nitrogen atom in general formula (I) is a quaternary ammonium cation, and either one of the acidic groups in general formula (I) is an anion in a

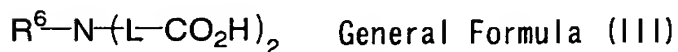
dissociated state, or one of R<sup>1</sup> groups has an anionic group.

3. The ink jet recording medium of claim 1, wherein the acidic group-containing compound is represented by the following general formula (II):



wherein R<sup>4</sup> and R<sup>5</sup> each independently represent one selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, -COR<sup>2</sup> and -SO<sub>2</sub>R<sup>3</sup> wherein R<sup>2</sup> and R<sup>3</sup> each independently represent an aliphatic group, an aromatic group or a heterocyclic group; and L represents a divalent linking group.

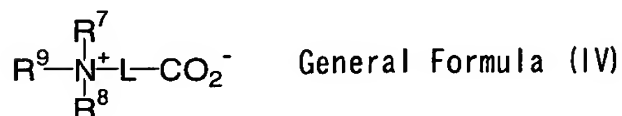
4. The ink jet recording medium of claim 1, wherein the acidic group-containing compound is represented by the following general formula (III):



wherein R<sup>6</sup> represents one selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, -COR<sup>2</sup> and -SO<sub>2</sub>R<sup>3</sup> wherein R<sup>2</sup> and R<sup>3</sup> each independently represent an aliphatic group, an aromatic group or a heterocyclic group; and L

represents a divalent linking group.

5. The ink jet recording medium of claim 1, wherein the acidic group-containing compound is represented by the general formula (IV):



wherein  $\text{R}^7$ ,  $\text{R}^8$  and  $\text{R}^9$  each independently represent an aliphatic group, an aromatic group or a heterocyclic group; and L represents a divalent linking group.

6. The ink jet recording medium of claim 1, wherein the metal is one selected from the group consisting of aluminum, titanium and zirconium.

7. The ink jet recording medium of claim 1, wherein the complex formed from the acidic group-containing compound and the metal is contained in the ink receiving layer in an amount of 0.01 to 20 g/m<sup>2</sup>.

8. The ink jet recording medium of claim 1, wherein the ink receiving layer further comprises a water-soluble resin.

9. The ink jet recording medium of claim 8, wherein the water-soluble resin is at least one selected from the group consisting of polyvinyl

alcohol resin, cellulose resin, ether linkage-containing resin, carbamoyl group-containing resin, carboxyl group-containing resin, and gelatin.

10. The ink jet recording medium of claim 8, wherein the ink receiving layer comprises a crosslinking agent capable of crosslinking the water-soluble resin.

11. The ink jet recording medium of claim 1, wherein the ink receiving layer further comprises particles.

12. The ink jet recording medium of claim 11, wherein the particles are at least one selected from the group consisting of silica particles, colloidal silica, alumina particles and pseudo-boehmite.

13. The ink jet recording medium of claim 11, wherein the particles are fumed silica particles, and are used in the ink receiving layer as an aqueous fumed silica dispersion containing the fumed silica and a dispersant.

14. The ink jet recording medium of claim 1, wherein the ink receiving layer further comprises a mordant.

15. The ink jet recording medium of claim 1, wherein the ink receiving layer is produced by crosslinking and curing a coating layer formed by applying a coating solution containing at least particles and a

water-soluble resin, and the crosslinking and curing is carried out by adding a crosslinking agent to at least one of the coating solution and a basic solution having pH exceeding 7 and then applying the basic solution to the coating layer either (1) at the same time that the coating solution is applied to form the coating layer or (2) in the course of drying the coating layer formed by applying the coating solution before the coating layer exhibits a decreasing rate of drying.

16. An ink jet recording method comprising forming an image with an ink set comprising, as minimum constituent elements, a yellow ink containing at least one yellow dye, a magenta ink containing at least one magenta dye, and a cyan ink containing at least one cyan dye, on the ink jet recording medium of claim 1, wherein an oxidation potential of at least one of the magenta dye and the cyan dye is higher than 0.8 V (vs SCE).